REVIEWS

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High Frequency Measurements—By August Hund. (International Series in Pure and Applied Physics), x + 676 pages, 417 figures, McGraw-Hill Book Co. Inc., 1951, Price $ 10.

The volume under review is the second edition of the well known book on high frequency measurement by the author first published in 1933. Since the publication of the first edition, many new high frequency techniques have come into use. For example, we had no commercial FM in 1929 (when the first edition was prepared). But now FM and also PM are in wide use. The range of the frequencies to be measured has also extended enormously. The new edition, therefore, required a large amount of revision and several chapters had to be completely re-written.

The volume under reference deals with measurement procedures at low and medium radio frequencies and also at high, very high and ultra high frequencies. It is divided into seventeen chapters of which the first three are introductory dealing with fundamental relations, circuit properties and laboratory apparatus and system for h.f. measurements. The next eight chapters are devoted to the procedures for measuring voltage, frequency, capacitance, self-inductance, mutual inductance and coupling, effective resistance, h.f. power and losses and resonance. This is followed by three chapters on ferromagnetic measurements, tube measurements, modulation measurements and measurements on lines and aerial systems. Chapter XVI deals with wave propagation determinations and the last chapter describes some miscellaneous measurements, *e.g.*, noise, electrical properties of piezo-electric crystals, gain determinations of microwave antennas and UHF admittance bridge. MKS units have been used throughout the book.

One or two criticisms may perhaps be made of this otherwise excellent and useful publication. It would have been better if SHF measurements were treated in a separate chapter instead of being distributed in several places as has been done. The modern UHF and microwave measurement procedures have been given only in broad outline. Further, the author's style of presentation is sometimes rather heavy. These are, however, only minor blemishes. The book, as a whole, is exhaustive and authoritative in its treatment. As such it should find a place on the table of every radio engineer and radio physicist. The printing, binding and get-up are of the McGraw-Hill standard.

(G. S. S.)